IN THE CLAIMS

Please amend the claims as follows:

Claims 1-22 (Canceled).

Claim 23 (Currently Amended): An electromagnetic coupler, comprising:

a first electric machine comprising a first stator having an axis bearing at least one first coil wound on [[a]] an annular first fixed yoke having an axis and a U-shaped transverse cross section, and configured to be coupled by magnetic induction with a first part of an output rotor mobile rotation-wise about the axis relative to the first stator, the coupling being provided via an inner drum, mobile rotation-wise about the axis relative to the first stator and to the first part and spaced apart from the first part and from the first yoke by ~~a first~~ an additional air gap and a ~~second~~ first air gap, respectively;

a second electric machine having an axis and comprising a second stator bearing at least one second coil wound on a second yoke ~~in a form of a second magnetic circuit or of a second yoke~~, and configured to be coupled by magnetic induction with a second part of the output rotor via a second air gap; and

an electronic unit configured to supply alternating current to the first coil,

wherein the first coil is wound on the first yoke about the axis of the first stator.

Claim 24 (Currently Amended): The electromagnetic coupler as claimed in claim 23, wherein ~~the first yoke is roughly annular having an axis and has a U-shaped transverse cross section,~~ first and second flanges of the first yoke ~~being~~ are terminated by first and second surfaces spaced apart from the inner drum by the ~~second~~ first air gap.

Claim 25 (Currently Amended): The electromagnetic coupler as claimed in claim 23, wherein [[a]] the at least one second coil[[,]] is annular[[,]] and is wound about the axis of the second electric machine.

Claim 26 (Currently Amended): [[The]] An electromagnetic coupler ~~as claimed in claim 25~~, comprising:

a first electric machine comprising a first stator having an axis bearing at least one first coil wound on a first fixed yoke, and configured to be coupled by magnetic induction with a first part of an output rotor mobile rotation-wise about the axis relative to the first stator, the coupling being provided via an inner drum, mobile rotation-wise about the axis relative to the first stator and to the first part and spaced apart from the first part and from the first yoke by an additional air gap and a first air gap, respectively;

a second electric machine having an axis and comprising a second stator bearing at least one second coil wound on a second yoke, and configured to be coupled by magnetic induction with a second part of the output rotor via a second air gap; and

an electronic unit configured to supply alternating current to the first coil,

wherein the first coil is wound on the first yoke about the axis of the first stator,

wherein the second yoke is roughly annular having an axis and ~~presents~~ has a U-shaped transverse cross section in which [[the]] first and second flanges have a regularly crenellated profile.

Claim 27 (Currently Amended): The electromagnetic coupler as claimed in claim 26, wherein the second part of the output rotor comprises an outer crown of magnetic studs, in line with and spaced apart from the first and second flanges of the second yoke by the second air gap.

Claim 28 (Currently Amended): The electromagnetic coupler as claimed in claim 25, wherein the second yoke is roughly annular having an axis and ~~presents~~ has a U-shaped transverse cross section, [[the]] first and second flanges of the second yoke being extended by first and second sets of prongs, respectively, disposed alternately, not in contact with each other, in line with and spaced apart from the second part of the output rotor by the second air gap.

Claim 29 (Previously Presented): The electromagnetic coupler as claimed in claim 23, wherein the second part of the output rotor comprises a crown of outer magnets in line with and spaced apart from the second yoke by the second air gap.

Claim 30 (Currently Amended): The electromagnetic coupler as claimed in claim 23, wherein the output rotor is ~~inserted into~~ disposed around an input rotor.

Claim 31 (Previously Presented): The electromagnetic coupler as claimed in claim 23, further comprising an input rotor at least partly covered by a binding band made of a magnetic material of type Fe-17.5Cr-0.5C.

Claim 32 (Previously Presented): The electromagnetic coupler as claimed in claim 31, wherein the binding band is produced by edge rolling a sheared strip of the magnetic material or by flat spiral winding a sheet of the magnetic material, turns of the winding being electrically insulated from each other.

Claim 33 (Currently Amended): The electromagnetic coupler as claimed in claim 23, further comprising first and second adjacent wafers, each comprising the at least one first coil wound[[,]] about the axis of the first stator, on a first fixed yoke, the first yokes of the first and second wafers being separated by a magnetic decoupling space.

Claim 34 (Currently Amended): [[The]] An electromagnetic coupler ~~as claimed in claim 23~~, ~~further~~ comprising:

a first electric machine comprising a first stator having an axis bearing at least one first coil wound on a first fixed yoke, and configured to be coupled by magnetic induction with a first part of an output rotor mobile rotation-wise about the axis relative to the first stator, the coupling being provided via an inner drum, mobile rotation-wise about the axis relative to the first stator and to the first part and spaced apart from the first part and from the first yoke by an additional air gap and a first air gap, respectively;

a second electric machine having an axis and comprising a second stator bearing at least one second coil wound on a second yoke, and configured to be coupled by magnetic induction with a second part of the output rotor via a second air gap; and

an electronic unit configured to supply alternating current to the first coil, wherein

the first coil is wound on the first yoke about the axis of the first stator,

the first electric machine and the second electric machine comprise first and second adjacent wafers, and

~~wherein~~ the output rotor comprises a magnetic decoupling space disposed between the first and second wafers, in a plane roughly perpendicular to the axis of the first stator.

Claim 35 (Previously Presented): The electromagnetic coupler as claimed in claim 33, further comprising a cooling circuit disposed in the decoupling space.

Claim 36 (Currently Amended): The electromagnetic coupler as claimed in claim 24, wherein the inner drum comprises first and second coaxial plates of the axis of the first stator, drilled in their centers by first and second holes bounded by first and second inner surfaces, respectively, and bearing first and second sets of prongs extending around [[the]] a periphery

of the first and second plates, respectively, the first and second plates being modeled and arranged relative to each other so that the prongs of the first and second plates are disposed alternately, not in contact with each other, in line with and spaced apart from the first part of the output rotor, the first and second inner surfaces being in line with and spaced apart from the first and second flanges of the first yoke, respectively.

Claim 37 (Previously Presented): The electromagnetic coupler as claimed in claim 36, wherein the first part of the output rotor comprises a crown of inner magnets, radially magnetized, with alternate polarities, and disposed in line with and spaced apart from the prongs.

Claim 38 (Previously Presented): The electromagnetic coupler as claimed in claim 37, wherein the second part of the output rotor comprises a crown of outer magnets in line with and spaced apart from the second yoke by the second air gap, and a number of the outer magnets is equal to a number of the inner magnets, the outer and inner magnets being disposed with a same direction of magnetization.

Claim 39 (Previously Presented): The electromagnetic coupler as claimed in claim 36, further comprising an input rotor at least partly covered by a binding band made of magnetic material of type Fe-17.5Cr-0.5C, and the binding band presents, above an area separating two adjacent prongs, an electromagnetic permeability less than that which the binding band presents above the adjacent prongs.

Claim 40 (Currently Amended): The electromagnetic coupler as claimed in claim 36, wherein at least one item selected from a group comprising the first yoke, ~~and/or~~ the first plate, ~~and/or~~ and the second plate [[are]] is made of a composite magnetic material of iron powder, or soft magnetic composites.

Claim 41 (Previously Presented): The electromagnetic coupler as claimed in claim 24, wherein the inner drum comprises first and second toothed crowns, coaxial with the axis of the first stator, drilled in their centers by first and second holes bounded by first and second inner surfaces, respectively, and bearing first and second sets of teeth, respectively, the first and second toothed crowns being modeled and arranged relative to each other so that the teeth of the first and second toothed crowns are disposed in line with and spaced apart from the first part of the output rotor, the first and second inner surfaces being in line with and spaced apart from the first and second flanges of the first yoke, respectively.

Claim 42 (Previously Presented): The electromagnetic coupler as claimed in claim 41, wherein the first part of the output rotor comprises an inner crown of magnetic studs in line with and spaced apart from the teeth.

Claim 43 (Currently Amended): The electromagnetic coupler as claimed in claim [[41]] 42, wherein the inner crown comprises as many of the magnetic studs as the first toothed crown or the second toothed crown has of the teeth.

Claim 44 (Previously Presented): The electromagnetic coupler as claimed in claim 43, wherein the magnetic studs extend axially so as to be able to simultaneously cover, at least partly, a tooth of each of the first and second toothed crowns.